

DEPARTMENT OF THE TREASURY

U.S. CUSTOMS SERVICE

HQ 958076

OCT | 9 | 1995

CLA-2 R:C:M 958076 JAS

CATEGORY: Classification

TARIFF NO.: 7019.20.40

Mr. D. E. Adams Boeing Commercial Airplane Group P.O. Box 7730 Wichita, KS 67277-7730

RE: Insulation Blankets for Aircraft Engine Thrust Reversers and Struts; Contoured Articles of Thin Gauge Stainless Steel and Silica Powder Wrapped in Fiberglass Cloth; Thermal Blankets, Parts of Turbojets, Subheading 8411.91.90; Accessories; Other Parts of Airplanes, Subheading 8803.30.00, Civil Aircraft Agreement (CA); Composite Good Made Up of Different Components, GRI 3

Dear Mr. Adams:

Your letter of June 9, 1995, concerns the tariff status of thermal insulating blankets for aircraft engine thrust reversers and struts. You submitted additional information in facsimile transmittals, dated September 28 and October 2, 1995.

FACTS:

The articles in question are thermal insulation blankets composed of thin gauge stainless steel, fiberglass cloth, and Min-K, a micro-porous silica material in fine white powdered form. The Min-K is placed between two pieces of flexible fiberglass cloth which is stitched horizontally and vertically to form a blanket. The stainless steel is formed into a contoured, crest-like shape, then folded under and spot welded to encase the blanket on both sides in the manner of a frame.

These blankets function primarily to provide thermal protection for thrust reversers and support struts against the heat generated by Rolls Race engines for the Boeing 757 class aircraft. Complete insulation blankets are cut-to-size and contoured and are mechanically fastened to the inner wall of a thrust reverser and at the point where a strut pylon joins the nacelte. Thrust reversers are attached to cowlings or macelles, which are the outer metal covers that house the plane's engines

but are not integral to the engines. Struts are structural members that connect the engine to the wings.

To decrease airspeed in preparation for landing, the pilot deploys the thrust reversers located in the nacelle/cowling housing. This reposition movable doors incorporated in the thrust reverser that diverts air entering the front of the nacelle over contoured vanes or louvers called cascades to produce reverse thrust.

You state that the thermal insulation blankets are not parts of the aircraft engine. Rather, they are integral to nacelles and struts. Because nacelles and struts are aircraft parts provided for in subheading 8803.30.00, Harmonized Tariff Schedule of the United States (HTSUS), a duty-free provision for other parts of airplanes or helicopters, you contend the insulation blankets should be similarly classified.

The provisions under consideration are as follows:

Articles of stone or of other mineral substances (including articles of peat), not elsewhere specified or included:

Other articles:

6815.99

Other:

6815.99.40

Other...3.6 percent

7019 Glass fibers (incl

Glass fibers (including glass wool) and articles thereof (for example, yarn, woven fabrics):

7019.20

Woven fabrics, including narrow fabrics:

Narrow fabrics:

Other:

7019.20.40

Other...8.2 percent

Other articles of iron or steel:

7326.90

7326

Other:

Other:

7326.90.85

Other...5.1 percent

8803

Parts of goods of heading 8801 or 8802:

8803.30.00

Other parts of airplanes or helicopters...Free

ISSUE:

Whether the thermal insulation blankets are parts of airplanes or accessories.

LAW AND ANALYSIS:

Merchandise is classifiable under the Harmonized Tariff Schedule of the United States (HTSUS) in accordance with the General Rules of Interpretation (GRIs). GRID 1 states in part that for legal purposes, classification shall be determined according to the terms of the headings and any relative section or chapter notes, and provided the headings or notes do not require otherwise, according to GRIs 2 through 6. GRID 3(b) states in part that composite goods consisting of different materials or made up of different components which cannot be classified under 3(a) shall be classified as if consisting only of the material or component which gives them their essential character, insofar as this criteria is applicable. GRI 3(c) provides that goods which cannot be classified by reference to 3(a) or 3(b) shall be classified under the heading which occurs last in numerical order among those which equally merit consideration.

The Harmonized Commodity Description And Coding System Explanatory Notes (ENs) constitute the official interpretation of the Harmonized System. While not legally binding on the contracting parties, and therefore not dispositive, the ENs provide a commentary on the scope of each heading of the Harmonized System and are thus useful in ascertaining the classification of merchandise under the System. Customs believes the notes should always be consulted. See T.D. 89-80, 54 Fed. Reg. 35127, 35128 (Aug. 23, 1989).

Heading 8803 provides for parts of goods of heading 8801 or 8802. It does not provide for accessories. The term "accessory" is not defined either in the HTSUS or in the Explanatory Notes. However, Webster's Third New International Dictionary (1961) defines an *accessory* as "an object or device that is not essential in itself but adds to the * * * effectiveness of something else." Webster's New International Dictionary, Second

Edition (1954) provides a nearly identical definition. The fact that these thermal insulation blankets may be certified by the Federal Aviation Administration for use in civil aircraft is not legally relevant if they are not parts in a tariff sense. The plane's engines are complete and fully functional as a means of propulsion or thrust, and the struts are structural members, both without regard to the thermal insulation blankets. There is no compelling argument that these articles are parts for tariff purposes because neither the engine nor strut depends on a thermal insulation blanket for its completeness or function. The insulation blankets are accessories for tariff purposes.

The thermal insulation blankets consist of different materials and/or components for which no HTSUS heading provides a specific description. The contoured stainless steel frame is provided for in heading 7326, as an article of iron or steel; the powdered silica is provided for in heading 6815, as an article of stone; and the fiberglass cloth is provided for in heading 7019 as an article of glass fibers. Under GRI 3(b) the thermal insulation blankets are to be classified as if consisting only of the material or component that gives them their essential character.

The contoured steel frame provides rigidity, form and shape to the insulation blanket and is the means for attaching the insulation blanket to the thrust reverser. Its insulation capability, however, is minimal. Technical information you made available to us indicates that while the woven fiberglass cloth is a thermal barrier, its main function is to contain or give form and shape to the silica. It is the silica, we are informed, that is the primary insulating material because of its low thermal conductivity. The silica does not absorb the heat, rather it dissipates the heat around the thrust reverser and out nearby ducts. However, another source of technical information indicates that the silica has minimal thermal insulating capability, and acts primarily as a heat sink to radiate heat throughout the entire mass of the silica. This prevents too much heat from building up in any one part of the silica. This source indicates it is the fiberglass cloth that is the primary insulant. Certainly, the fiberglass is the more costly component and provides greater mass or bulk to the blanket. In resolving issues of essential character the ENs, at p. 4, authorize us to consider the nature of a material or component, its bulk, quantity, weight or value among other relevant factors.

Nevertheless, we conclude that the evidence available at this time is inconclusive as it relates to the issue of essential character. For this reason, under the authority of GRI 3(c), the thermal insulation blankets are to be classified in heading 7019, as this is the heading which occurs last in numerical order from

among those that equally merit consideration. We do not consider heading 7326 to merit equal consideration.

HOLDING:

Under the authority of GRI 3(c), the thermal insulation blankets are provided for in heading 7019 as glass fibers and articles thereof. They are classifiable in subheading 7019.20.40, HTSUS.

W. anemck John Durant, Director Tariff Classification

Appeals Division

cc: Mr. Ron Hodge

F.H. Kaysing Co. of Wichita

P.O. Box 12497 Wichita, KS 67277 ----- Message Contents

Dear (b)

As per our telephone conversation, I have no problem with the first part of your proposed "rule" for the classification of parts which appears in your draft ruling (i.e., that a part is an article which is an integral and constituent component of another article, necessary to the completion of the article...). However, the second portion of the proposed "rule" (...without which the article could not operate in its intended capacity) is problematical. Items which are necessary for an article to operate in its intended capacity may be classified as parts even though they are not integral and constituent components. In other words, the classifying party concludes that, because an item is necessary for the article to operate in its intended capacity, it must therefore be an integral and constituent component. As I mentioned to you, there are many items which are necessary to the operation of an article but are not integral and constituent components of the article - for example, certain non-mechanical toner cartridges for use with laser printers or copiers, catalysts for use with reactor equipment, or targets for use with sputter coating machines.

Accordingly, I suggest this second portion of your proposed classification "rule" for parts be eliminated in order to prevent items which are necessary to the operation of an article but are not integral and constituent parts of the article from being erroneously classified as parts.

Best regards,

(b) (6), (b) (7)(C)

(b) : (b) (5) r "pa ty"

operate ty"

Regards, (b)

Message	Content	S



Good timing. I'm one hour away from leaving here to drive a car down to my daughter in Charleston. Will be gone till next Thursday, and you need an immediate (!) response? Have not read case, discussed issue somewhat with (b) (6), (b) and (God forgive me) tend to agree with (b) response (whatever the hell that was). Will generate a more open, honest and probably more valid reply after I get back. Till then, ditto me on (b)

Reply Separator

Subject: new approach to parts

Author: (b) (6), (b) (7) at ORR-WASH-1

Date: 10/12/95 11:19 AM

Pay attention, you quys!!! As you may know, in the past, under the TSUS, and into the HTSUS, we have been using several "parts" arguments, usually picking the one that benefits us. First, we have the "safe and efficient use" test in Beacon Cycle, C.D. 4764. Then, theres the line of cases such as American Schack Company, 1 CIT 1 (1980) which held an article to be a part if required by law, either for safety reasons or otherwise. Finally, theres the "necessary to the completion of" test in Clipper Belt Lacer Co. 738 F. Supp. 528. Now, outside attorneys are using the safe and efficient use test against us to classify stuff as parts that clearly are not parts, and i think its time to draw the line. So, I propose to say the "necessary to the completion" test is the one we will use under the HTSUS. This is the ONLY parts test sanctioned by the CIT under the HTSUS in Technicolor Videocassette Inc., Slip Op. 94-43. Clipper Belt Lacer used the same language but that was a TSUS case. I'm attaching a draft of HQ 958076, which is (b) case, for you all to look at. I'm not asking for a concensus in New York, so each of you can reply independently of the others, or you can choose to ignore the issue. At any rate, if you do choose to comment, please do so quaickly as this case has to go out ASAP. Thanks.

telecon per 10/6 (a) Stainles Steel 4326 (b) (6), (b) (2) G filerglass blankets 7019. 20,50 Osilica pourder ~ 6815 articles of stone 250x 2811 That disk verthroughout restere dilica nimor insulant in any one port of the silver Il we muir woll insulating material insulating more bulk 10/10 (b) (6), (b) (7)(c) at Boling

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mgs: cuticle nipper

sup = to sever by pinching or squaeging

NY 808249

Manicure or pedicire sets and instruments 8214. 90.90 other articles of cutlery

№ 8214.20.30 noil nippers and clippers used for manicure or pedicure purposes

Q is a cuticle nipper a nail nipper?

EN 1115 cuticle presser pusher -> are these nippers quor Guon - look to this things use to determine whether it is whi to nomine designation

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and literature soon.

(1) cité general rule expressió unius est exclusir altere un absence of facture to name cuticle nippers expellely excludes them browlening expanding the town of the beading " . O the like a .

△ 8214. 20.30 mail support and clippers used for manicure or pedicure purposes a is a cuticle nipper a nail nipper? EN 1115 cuticle presser pusher - are these nippers Quon Quon - less to the things use to determine whether it is will en nomine sessionation. I not 8214:20.30 because the articles enumerated to nomine are exhaustive and do not include cuticle nippers see caren of construction Sturm p 179. 9/25 saying I readed dample and literature Callel again 9/26. Mille Milling will provile sample and literature soon. approach nobsence of facture to name cuticle suppers expectely excludes them moderning ordening language panding the run of to a heading "and the like " or smuler articles" than pay ito a canon of construc and only applies where legis hist doesn't suggest a contr leges utant. (3) rete ENS reference to "con-extractore" p. 1115, an undry not listed is 82 14. 20.30 as inhesting the subbeal is work expansive then nevel articles provided it and mother is for a manicure (4) then & citing GRI6 say 8214. 20.30 is more specific.

---- Message Contents ---I concur with your discussion of the "nature" of parts and see the

"necessary to completion" standard as being both sound and conclusive.

Reply Separator

Subject: thermal insulation blankets Author: (b) (6), (b) (7) at ORR-WASH-1

 $10/1\overline{1/95}$ 1:42 PM Date:

> I'm still trying to get (b) to respond. So far, no luck in tacting him. For the record, please reply with your comments on the proposed draft.

* (b) (6), (b) did respond by comail but I count find the response.

He recommended away 1919 not recome theylow imported execution character, but because its last in numerical evelor. Let their grove essential character or bet them argue the 155WC-



Memorandum

DATE:

MAY 1 5 1995

TO

: Director, Office of Regulations and Latings:

Leadquarters, U.S. Customs Service

PROM

: Chief. WIS Machinery Franch

Sational Innoit Specialist Staff

SUBJECT:

Dariff what ification of thrust powerser and signi

maula ion tlankets from England

Thes request for a tariff classification ruling from F. H. Faysing Co.. on behalf of the Besing Company, is being forwarded for year attention due to its completity and look of clear upo edence.

Here are apparently to a insulation blank to the cutive consideration. The fits within the inner wall of the cutive engine cowling and the other is used at the point where the structural joins the nacelle (engine housing). These blanks are entouted a fit the part they are protecting and are said to ender a dimpled metallic foil stainiess start skin with a flock insulant. It is not known what this insulation material is. These planks to are designed to protect, respectively, thoust never ere and strutt from excessive heat, presumably the heat denoted when the aircraft's thrust reversers are in operation.

Through reversers are used as an addington to the algorialities against the stack on all wall often it has landed. Threist resenters are of the those the in the characteristical for existen, the notes to lose the marmal gas stream exit. Castad vales them direct the cas stream in a forward direction to that the but threst opposes the alteraf, motion. (2) in the cold stream governor's press, the notablion -vstem moves a franciating novirearrand and at the same time folds the blocker doubt to blane off the cold stream final abunds. This direction the singles through the caseade inc. (3) The bucket target system the ast thrust reverser tipe, ases backet-type digrate to teleral the inot gas saramm. It is not known what thrust I versor against the in use in the instant case. There is no case law on inclassification of thrust reversors, but it is the opinion of said office that they are aircraft engine parts under SIII. See Hy file 957072 JAS, which is still in progress.



RECEIVED JUN 2 2 1995

These insulation identity are probably provided for either as parts of directly engines (8411) or as parts of directly (8803).

Those provisions are as follows:

Yurbojets, turbopropellers and other gas turbines, and parts thereof:

Parts:

...Free

8411.91 Of turbolets or turbopropeliers:
8411.91.10 Cast-iron parts
8111.91.90 Other...3.7 percent

* * * * *

8803 Parts of goods of heading 8801 or 8800:
8803.30.00 Other parts of airplanes or helicopters

Marchandise is classifiable under the Harmonized lariff Schedule of the inited States (HTSUS) in accordance with the General Rules of Interpretation (GRIs). GRI 1 states in part that for local purposes, classification shall be determined according to the terms of the headings and any relative section or chapter notes, and provided the headings or notes do not require otherwise, according to GRIs I through a.

For purposes of classification in subleading 8802.30.00, the expressions "parts" and "parts and accessories" do her appearance of headings 8401 to 8470, or parts thereof. Section XVII, Note 2(e), HTSUS. Therefore, if the insulation blunkers in issue are parts of heading 8411, they cannot be classified in heading 8803. In this regard, goods found to be parts that are suitable for use solely or principally with a particular kind of machine or with a number of machines of the same heading are to be classified with the machines of that heading. Section XVI. Note 2(b), HTSUS.

As a proliminary issue, jet turbines produce propulsion of thrust by espelling air at a much higher velocity than its intake velocity. Essentially, air taken into the turbine at a velocity equal to the plane's airspeed is compressed, heated and expanded by the compastion of tuel, then expelled at a higher velocity. This causes propulsive thrust in the apposite direction.

2s to whother the immulation blackets are marts of heading 8411, one line of cases has held that an article is a past for

main article so that it in some was contributes to the safe or efficient operation of that article. Beacon Cycle & Supply Co., Inc. v. United States. St Cust. Ci. 46, C.D. 4784 (1978). As a corollar, to this primaple, articles have been held to be parts of other articles of their presents is required by law, either for safety reasons or otherwise. The American Schack Company, Inc. v. United States, 1 CIT 1 (1980). Under another line of cases, estimates are recorded as parts if they are necessary to the completion of the orticle with which used, that is, if they are interest constituent of component parts without which the parent orticle cannot function as that article. Clipper Belt hacer Co., Inc. v. United States. 738 F. Sapp. 718 (CIT 1990).

Whether or not their presence on the housing of a jet engine is required by Federal Aviation Administration regulations is undecumented. Nevertheless, because the thrust reverser insulation tanker is directly related to protecting a thrust reverse; as it slows an alleraft after landing, there is a demonstrated news to the safe and efficient operation of the engine and, thus, the plane itself, as to qualify as a part. For this reason, the thrust reverser insulation blanket is classifiable as a part of the article to which it is most immediately related - the engine - rather than to the larger whole - the plane.

The struct insulation blanket, on the other hand, appears to be protecting the struct (polon) only and is in to way connected to the performance of the engine, but is integral to the pylon itself. The EN to 8803 at page 1145 state that pylons are classified as aircraft parts in 8803. Since the struct insulation blanket is not more specifically provided for as an engine part in 8411, it is classifiable as an aircraft care in 830.

If there are any questions, please contact National Emport Specialist Patrick Wholey at (212) 16: -5065.



attachment:

Facsimile Cover Sheet

The
Boeing
Company

Fax no: (b) (2), (b) (6)

To: (b) (6), U.S. CUSTOMS SERVICE

From: (b) (6), (b) CT. 2, 1995 M/S: K18-25 Phone: (b) (2), (b) (6)

Time: 08:42:30 PDT

Date: Monday 2 Oct 1995

Number of pages: 2 (including this page)

To: MR. (b) U.S. CUSTOMS SERVICE WASHINGTON, D.C.

From: (b) (6), (b) . GCT. 2, 1995 M/S: K18-25 Phone: (b) (6), (b) (7)

M/S: K18-25 Phone: (b) (6), (b) (7)

Dept: Materiel Traffic

CASCHASA I ASA

Company Address: .e Boeing Company - Wichita, Ks.

.PAGE subj: INFORMATION ON DARCHEM INSULATION BLANKETS

MR. (b) , BOEINL UYER (b) (6). (b) (7) ADVISES THAT . MOST KNOWLEDGEABLE PERSO AT BOEING CONCERNING THESE BLANKETS IS BOEING ENGINEER MR. (b) (2). (b) (7) (PRONOUNCED (b) . HIS PHONE NUMBER IS (b) (6). (b) (7) . FEEL FREE TO GIVE HIM A CALWITH YOUR QUESTIONS. I GAVE HIM A BRIEF BACKGROUND OF WHAT HAS TRANSPIRED SO THAT HE WILL BE FAMILIAR WITH THE SUBJECT MATTER.

HE DID STATE THAT (b) (4) PURCHASES THE MIN-K BLANKETS ALREADY MADE UP, AND BUYS THE STAINLESS STEEL FOIL IN LARGE ROLLS, CUTS THE BLANKETS AND FOIL TO SIZE, AND THEN, MANUFACTURES THE COMPLETED NACELLE INSULATION BLANKETS.

MR. (b) (6) HAS NO KNOWLEDGE OF THE COST/VALUE RELATIONSHIP BETWEEN THE SILICATHE FIBREGLASS CLOTH, AND THE STAINLESS STEEL FOIL. THE BUYER HAD (b) (4) QUOTE ON THE FINISHED INSULATION BLANKETS FOR THE NACELLE AND STRUT OF THE AIRCRAFT.

IF YOU REQUIRE ANY FURTHER INFORMATION, PLEASE CONTACT ME. THANKS, (b) (6), (b)

silica minerals

2505.10.00 5, lica

Silica minerals, a branch of the SILICATE MINERALS, are composed of silicon dioxide and only minor amounts of additional components. At least seven natural polymorphs exist. QUARTZ, the most abundant, makes up almost 12 percent of the Earth's crust. CRISTOBALITE and TRIDYMITE are uncommon; COESITE, STISHOVITE, vitreous silica, and melanophlogite are rare. Several additional silica polymorphs have been synthesized in the laboratory. OPAL, a precious gemstone, is made up of hydrous silicas of several types.

Properties

The silica minerals are hard (6 to 7 on the Mohs scale), resistant to mechanical stress, nonmagnetic, colorless when pure, and nearly insoluble except in hydrofluoric acid. Specific gravity ranges from 2.0 to 2.3 for melanophlogite, vitreous silica, opal, tridymite, and cristobalite, to 2.65 for quartz, 2.93 for coesite, and 4.28 for stishovite.

Structure

In stishovite each silicon atom is surrounded by six oxygen atoms in octahedral coordination. All other silica minerals are composed of silicon atoms surrounded by four oxygen atoms in tetrahedral coordination. These tetrahedra are linked into three-dimensional structures, each with a different geometry characteristic of that polymorph. In quartz, cristobalite, and tridymite, tilting of the tetrahedra without structural disruption occurs with temperature increase to give rise to forms with higher symmetry, the so-called high forms.

Uses

Quartz, the most useful of the silica minerals, is used for crushed stone and sand in concrete and mortar, and in refractories, foundry molds, ceramics, glass, silicone

chemicals, s...con carbide, silicon metal, ...uxes for melting, abrasives, and sandblasting, as well as for hundreds of other uses. High-purity quartz is used to make vitreous silica, which has very low thermal expansion, high elasticity, and transparency to light--qualities desirable for lenses, optical fibers, components of precision instruments, and premium grades of chemical glassware. Certain varieties of quartz have value as semiprecious gems, as does some opal.

Occurrence

Silica minerals are major constituents of light-colored igneous rocks such as GRANITE, GRANODIORITE, and QUARTZ MONZONITE and their volcanic equivalents. Because it is resistant to mechanical and chemical weathering, quartz makes up the bulk of SANDSTONE and siltstone, two of the most common sedimentary rock types. Most metamorphic rocks are also rich in quartz; one type, QUARTZITE, consists mostly of quartz.

Silica minerals can be transported in steam or in warm waters. At higher temperatures and pressures, fluids carry greater amounts of silica. Silica precipitates when cooling or pressure-release occurs. Quartz veins and the quartz gangue common in many ore deposits are deposited by hot waters. Geyserite, or siliceous SINTER, is hydrous silica rapidly precipitated from cooling waters flowing away from geothermal springs and geysers. Cristobalite and tridymite can form from superheated steam, and opal forms slowly from cool solutions.

David B. Stewart

Bibliography: Deer, W. A., Rock-Forming Minerals, vol. 4 (1963); Simonato, Lorenzo, et al., Occupational Exposure to Silica and Cancer Risk (1990); Susman, R. B., The Phases of Silica (1965).

HQ <u>955742</u>

April 4, 1994

CLA-2 CO:R:C:M 955742 KCC

CATEGORY: Classification

TARIFF NO.: 2620.90.90

District Director U.S. Customs Service 300 South Ferry Street Entry Team 3, Room 1015 Terminal Island, California 90731

RE: Protest 2704-93-103276; micro silica sand; EN 26.20; 2621.00.00; EN 26.21; 6815.99.44; EN 68.15

Dear District Director:

This is regards to Protest 2704-93-103276, which pertains to the tariff classification of micro silica sand under the Harmonized Tariff Schedule of the United States (HTSUS).

FACTS:

The product at issue is micro silica sand, D-124 Litefil, which is a lightweight mineral filler used as a partial replacement of heavyweight fillers, i.e., replacement of heavyweight aggregates used in hydraulic cement based slurries for oil/gas well drilling. Upon importation, the entries of the micro silica sand were liquidated on August 13, 1993, under subheading 6815.99.40, HTSUS, as other articles of stone or of other mineral substances, not elsewhere specified or included.

This determination was based on Customs Laboratory report #7- 93-21132-001 dated July 9, 1993, which found that "[t]he sample, an off-white powder identified as "D-124 Litefil", is composed of mineral substances predominantly of silica. In our opinion, it is further processed and does not have the characteristics of natural sand."

In a protest timely filed on October 21, 1993, the protestant contends that the micro silica sand is properly classified under subheading 2621.00.00, HTSUS, as other slag and ash. The protestant states that its product is not a manufactured article, but is part of the composition of fly ash, a waste material derived from the combustion of coal at power stations. The power station disposes of the flyash by sluicing it into an ash storage dam. The lightweight portion of the ash separates from the heavyweight portion by floating to the surface of the water in the ash dam. The lightweight ash is then extracted from the ash dam, allowed to de-water, dried, screened and packaged for shipment. The protestant states that the chemical composition of its product is 55% silica, 43% alumina and less than 1% iron.

The competing subheadings are as follows:

silica powder

2621.00.00 Other slag and ash, including seaweed ash (kelp).

6815.99.40 Articles of stone or of other mineral substances(including articles of peat), not elsewherespecified or included...Otherarticles. Other...Other.

ISSUE:

What is the tariff classification of the micro silica sand under the HTSUS?

LAW AND ANALYSIS:

The classification of merchandise under the HTSUS is governed by the General Rules of Interpretation (GRI's). GRI 1, HTSUS, states, in part, that "for legal purposes, classification shall be determined according to terms of the headings and any relative section or chapter notes...."

Upon further examination of the micro silica sand and the information submitted by the protestant, we are of the opinion that the micro silica sand is classified under subheading 2620.90.90, HTSUS, which provides for "Ash and residues (other than from the manufacture of iron or steel) containing metals or metal compounds...Other...Materials not provided for elsewhere in this heading...Other."

In understanding the language of the HTSUS, the Harmonized Commodity Description and Coding System Explanatory Notes (ENs) may be utilized. The ENs, although not dispositive, are to be used to determine the proper interpretation of the HTSUS. See, T.D. 89-80, 54 Fed. Reg. 35127, 35128 (August 23, 1989). EN 26.20 (pg. 210), states that:

This heading covers ash and residues (other than those of heading 26.18 or 26.19) which contain metal or metal compounds, and which are of a kind used in industry either for the extraction of metal or as a basis for the manufacture of chemical compounds of metals. They result from the treatment of ores or intermediate metallurgical products (such as mattes) or from electrolytic, chemical or other processes which do not involve the mechanical working of metal (emphasis in original).

In this case, the micro silica sand is a residue containing metal compounds, i.e., aluminum oxides, which is obtained from burning coal, not the manufacture of iron or steel. The micro silica sand has been advanced in value or condition by a flotation separation process and by the subsequent drying and screening. Therefore, it is classified as other ash and residues containing metals or metal compounds, not from the manufacture of iron or steel under subheading 2620.90.90, HTSUS.

The protestant contends that the micro silica sand is classifiable under subheading 2621.00.00, HTSUS, as other slag and ash. EN 26.21 (pg. 211), states that heading 2621, HTSUS, "...covers slag and ash not falling in heading 26.18, 26.19 or 26.20, derived from the working of ores or from metallurgical processes, as well as those derived from any other material or process (emphasis in original)." Furthermore, EN 26.21 states that the products covered by heading 2621, HTSUS, include "[a]sh and clinker of mineral origin (e.g., coal, lignite or pet ashes)." As stated previously, the micro silica sand is properly classified under heading 2620, HTSUS. Therefore, the micro silica sand is excluded from classification under subheading

silica powder

2621.00.00, HTSUS, as other slag and ash.

Subheading 6815.99.44, HTSUS, provides for other articles of stone or of other mineral substances, not elsewhere specified or included. EN 68.15 (pg. 909), states that "[t]his heading covers articles of stone or of other mineral substances, not covered by the earlier headings of this Chapter and not included elsewhere in the Nomenclature... (emphasis in original)." As stated previously, the micro silica sand is classified elsewhere in the Nomenclature, subheading 2620.90.90, HTSUS. Therefore, it is not classifiable under subheading 6815.99.44, HTSUS.

HOLDING:

The micro silica sand, D-124 Litefil, is classified under subheading 2620.90.90, HTSUS, as other ash and residues containing metals or metal compounds, not from the manufacture of iron or steel.

Since the rate of duty under the classification indicated above is more than the liquidated rate, the protest should be DENIED. In accordance with Section 3A(11)(b) of Customs Directive 099 3550-065, dated August 4, 1993, Subject: Revised Protest Directive, this decision should be mailed, with the Customs Form 19, by your office to the protestant no later than 60 days from the date of this letter. Any reliquidation of the entry in accordance with the decision must be accomplished prior to mailing of the decision. Sixty days from the date of the decision the Office of Regulations and Rulings will take steps to make the decision available to Customs personnel via the Customs Rulings Module in ACS and the public via the Diskette Subscription Service, Lexis, Freedom of Information Act, and other public access channels.

Sincerely,

John Durant, Director

Facsimile Cover Sheet

The
Boeing
Company

Fax no: (b) (2), (b) (6)

To: MR. (b) (6), (b) U.S. CUSTOMS SERVICE

 \subseteq

From: SEPT 78, 1995 M/S: K18_75 Phone: (b) (2), (b) (6)

Time: 12:57:51 PDT

Date: Thursday 28 Sep 1995

Number of pages: 2 (including this page)

To: MR. (b) (6), U.S. CUSTOMS SERVICE WASHINGTON, D.C.

From: (b) (6), (b) SEPT 28, 1995 M/S: K18-25 Phone: (b) (6), (b) (7)

M/s: K18-25 Phone: 316-523-4312

Dept: Materiel Traffic

Company Address The Boeing Company - Wichita, Ks.

.PAGE Subj: DATA PERTAINING TO DARCHEM INSULATION BLANKETS

MR. (b) , I JUST INISHED TALKING TO THE BUYER OF . BLANKETS, AND THIS IS TH INFORMATION I OBTAINED. THE OUTER COVERING OF EACH BLANKET IS ACTUALLY A HEAV DUYT STAINLESS STEEL TEXTURED FOIL.

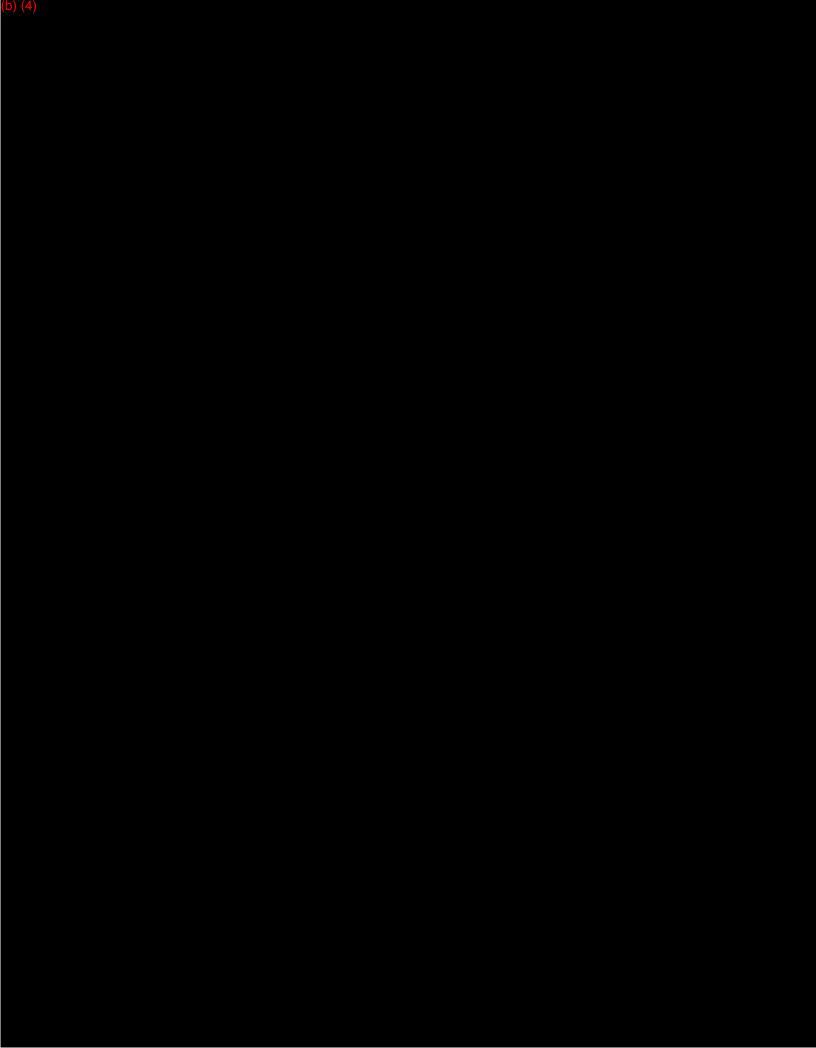
THE MIN-K IS A MICRO-POUROUS SILICA MATERIAL IN VERY FINE WHITE POWDER FORM.
THE MIN K MATERIAL IS PLACED BETWEEN A FLEXIBLE FIBREGLASS CLOTH MATERIAL AND
STITCHED BOTH HORZONTALLY AND VERTICALLY TO ENCAPSULATE THE MIN-K MATERIAL
FROM SHIFTING, DUE TO THE NATURE OF THE MIN-K BEING IN POWDER FORM.
THE HEAVY TEXTURED STAINLESS STEEL FOIL IS PLACED ON BOTH SIDES OF THE MIN-K

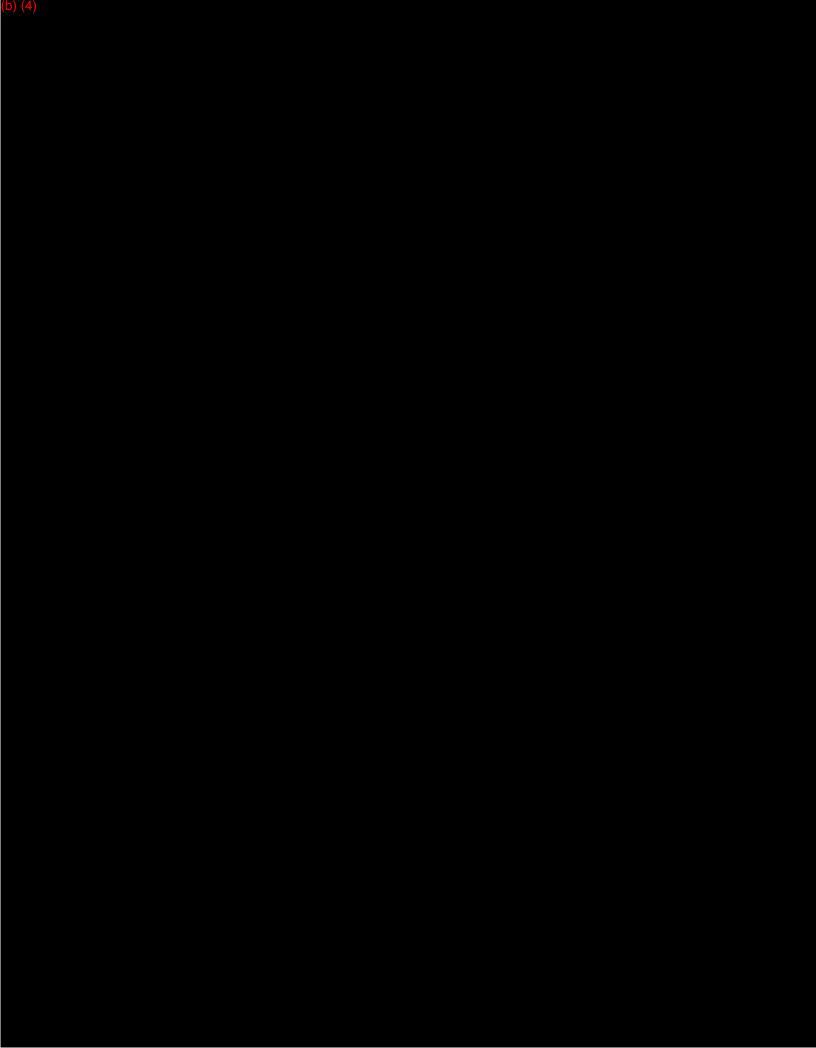
THE HEAVY TEXTURED STAINLESS STEEL FOIL IS PLACED ON BOTH SIDES OF THE MIN-K BLANKET, ENCASING THE BLANKET, AND THEN, FORM TO EXACTLY FIT THE INSIDE OF THE AIRCRAFT NACELLE AND STRUT.

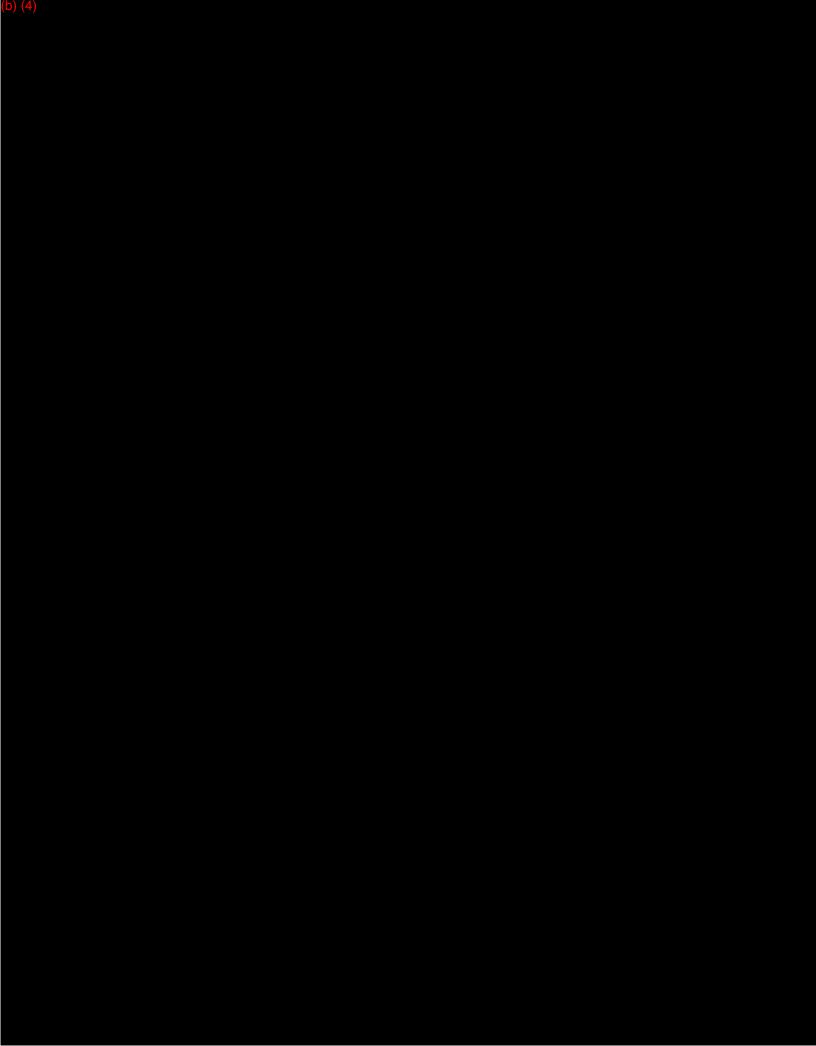
I HAVE THREE PAGES FROM A BROCHURE THAT I HAVE FAXED TO YOU THAT EXPLAINS THIS PROCESS.

PLEASE CONTACT ME AGAIN IF YOU REQUIRE ANY FURTHER DATA. THANKS, (b) (6), (b) , TRAFFIC ADMINISTRATOR

 $Z_i =$

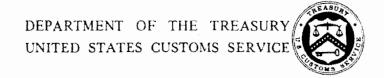






UNITED STATES GOVERNMENT

Memorandum



DATE: April 19, 1995

FILE: (b) (2)

TO:

U.S. Customs Service

Customs Information Exchange 6 World Trade Center, Room 437

New York, New York 10048

FROM:

District Director St. Louis, MO 63134

SUBJECT: Binding Ruling Request

The attached binding ruling request is forwarded for your action. The district assigned number is (b)(2)

This request is from F.H. Kaysing Co. of Wichita on behalf of The Boeing Co., Inc. The product consists of a thrust reverser and strut insulation blanket made in England.

The information submitted appears to be sufficient to determine a binding classification. Suggested classification is under subheading 8803.30.0010 HTSUS at free rate of duty.

(b) (6), (b) (7)(C)

F. H. Kaysing Co. of Wichita

OFFICE ADDRESS: 920 N. Tyler Rd., Suite 302 Wichita, Kansas 67212

Address all correspondence to: Post Office Vox 12497 Wichita, Kansas 67277

> 316-721-8980 FAX # 316-721-8986

U.S. Custom House Brokers Omport and Export Services

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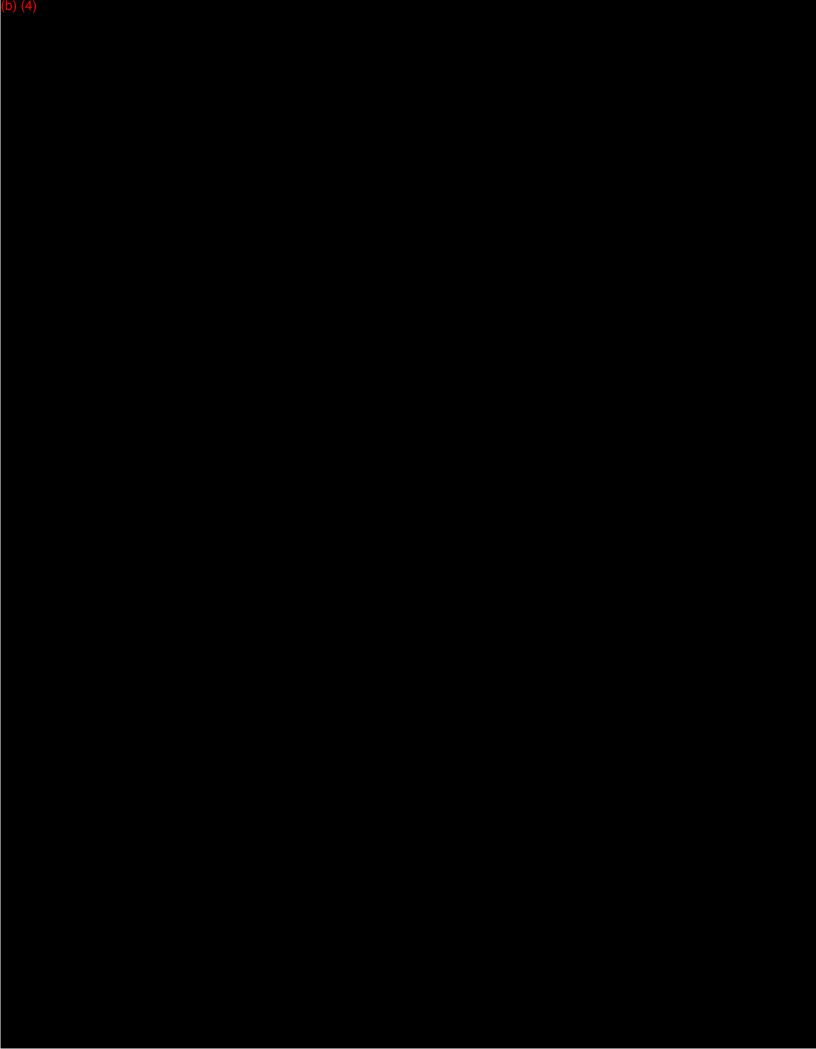
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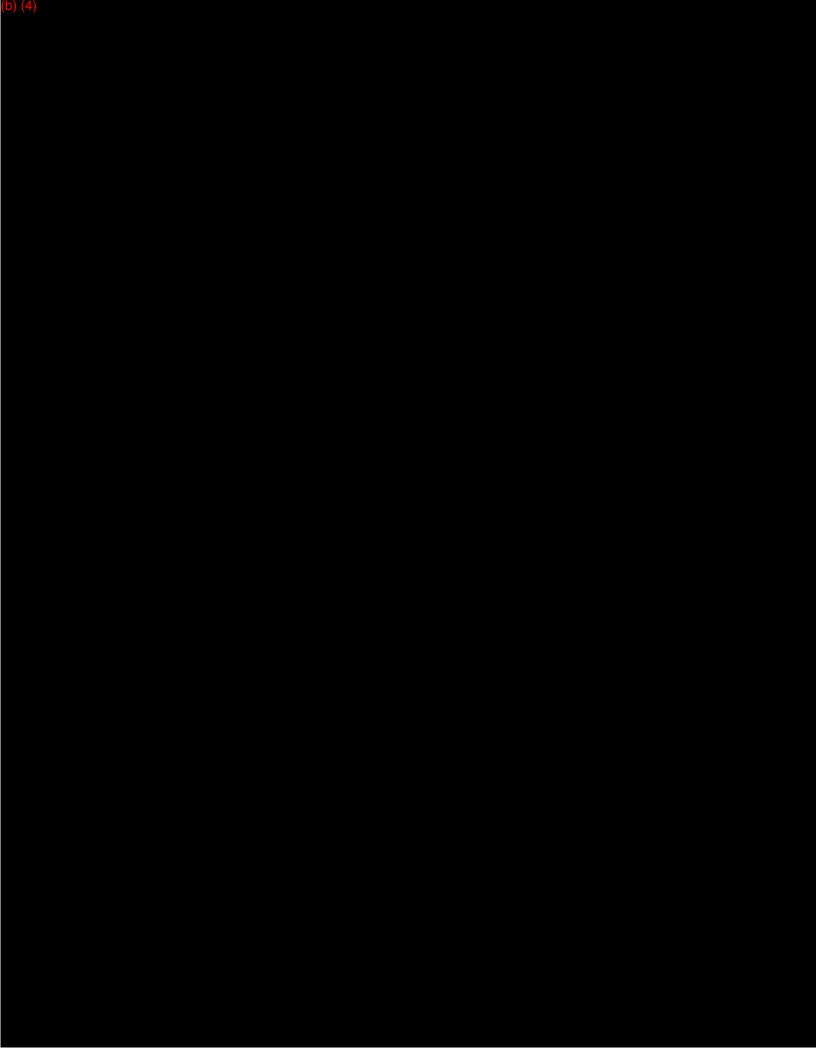
heading 65.x1 located on pg. 1445. The articles principle was in the Unite States is for civil aliciaft applications. The utuate, racelles/cowlings and thrust reversers (which attach to the nacelles inner wall) are produced by the S eigs Japany, Violiza, Kansas.

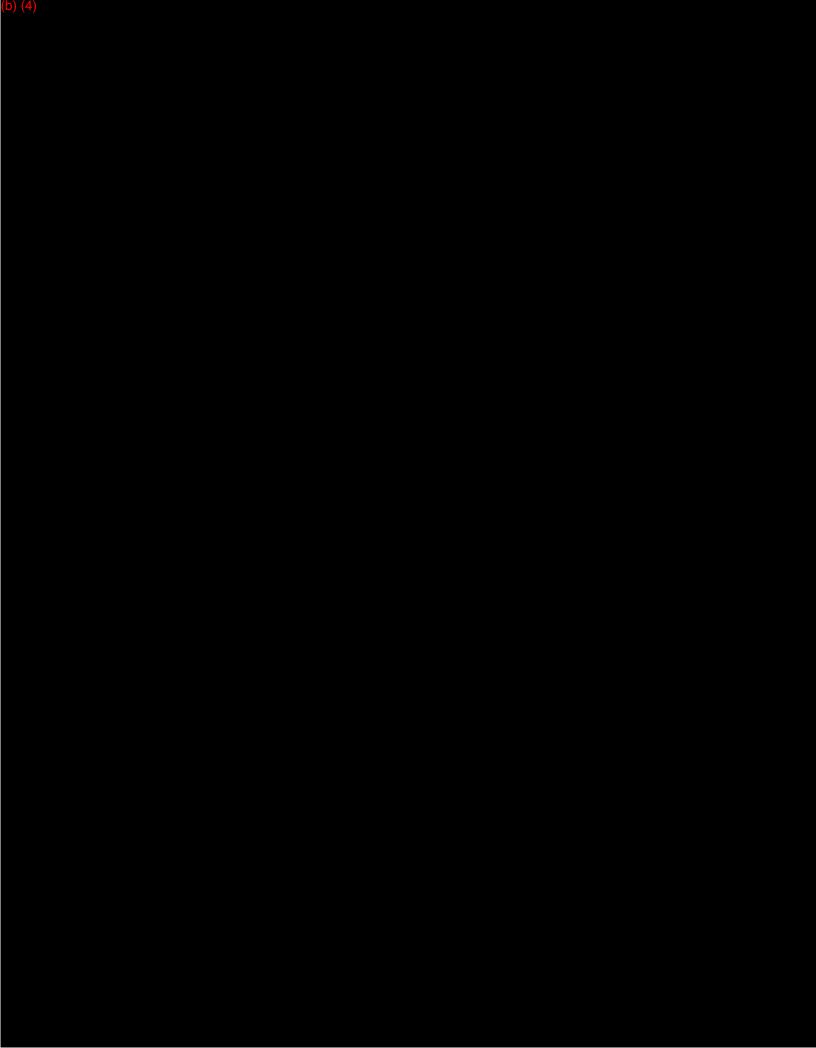
Flease address all correspondence to encelves, or dail Mr. Ron Hodge at 310-7013-880. We appreciate your ismediate attention and helpfolness.

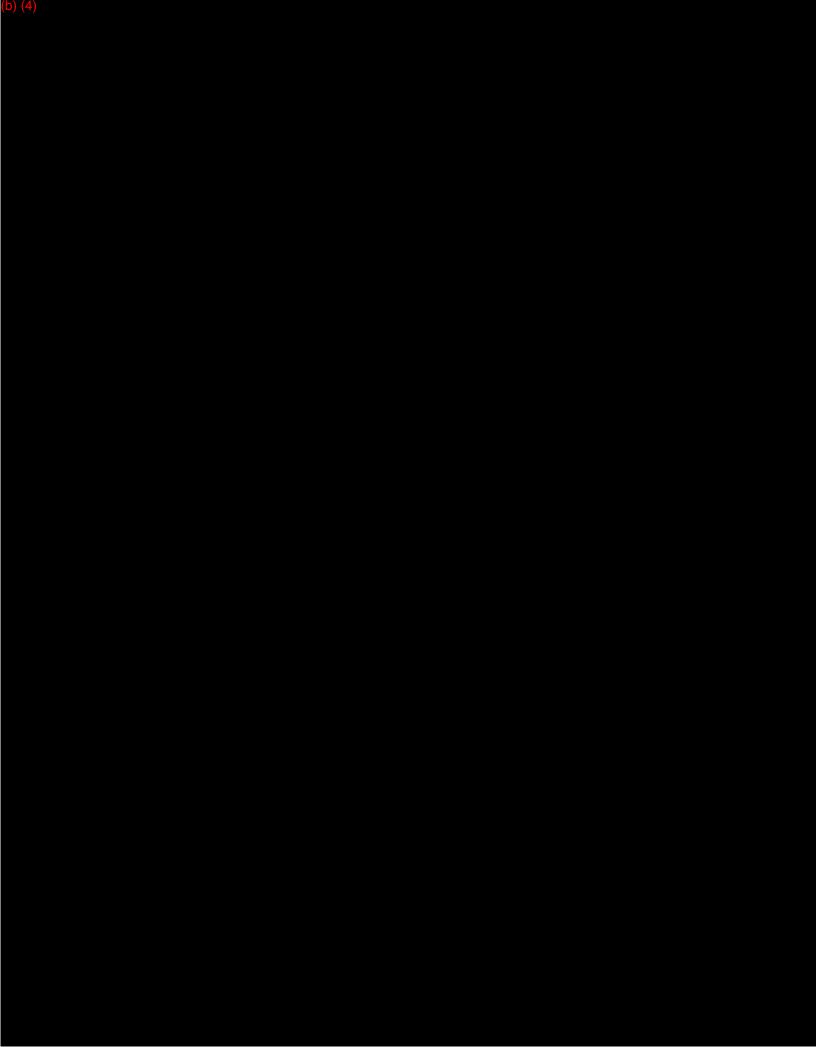
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Boeing Commercial Airplan* Group Wichita Division P.O. Box 7730 Wichita KS 67277-7730

June 9, 1995 3-1421-0695-06/DEA:hm

Mr. (b) (6), (b) (7)(C)

958076

Office of Regulations and Rulings U. S. Customs Service Headquarters 1099 14th Street Suite 4000 Washington, D.C. 20005

Subject:

Ruling Request For Aircraft Nacelle

and Strut Insulation Blankets

Re:

BUEING

New York Reference (b) (2)

Enclosed please find a Boeing memo from Mr. (b) (6), Model 737-700 Design Engineer, which(b) to be included with the insulation blanket data you will receive from Mr. (b) (6), (b) (7)(C), U. S. Customs, New York.

The nacelle or cowling, manufactured by The Boeing Company, as stated, is made up of many components. One of these integral components is the insulation blankets. We believe their correct tariff schedule number is 8803.30.0010 when installed in civil aircraft.

The Harmonized Commodity Description and Coding system Explanatory Notes (EN) and the HTSUS, although not dispositive under Customs law, should be looked to for proper interpretation of the HTSUS. The EN to heading 84.11 at page 1153-1155 reads in pertinent part as follows:

"This heading covers turbo-jets, turbo-propellers and other gas turbines. The turbines of this heading are, in general, internal combustion engines which do not usually require any external source of heat as does, for example, a steam turbine.

(A) Turbo-Jets

A turbo-jet consists of a compressor, a combustion system, a turbine and nozzle, which is a convergent

Page 2 Mr. (b) (6), (b) (7)(C) 3-1421-0695-06/DEA:hm

BOEING

duct placed in the exhaust pipe. The hot pressurized gas exiting from the turbine is converted to a high velocity gas stream by the nozzle. The reaction of this gas stream acting on the engine provides the motive force which may be used to power aircraft. In its simplest form, the compressor and turbine are accommodated on a single shaft. In more complex designs the compressor is made in two parts (a two spool compressor) in which the spool of each part is driven by its own turbine through concentric shafting. Another variation is to add a ducted fan usually at the inlet to the compressor and drive this either by a third turbine or connect it to the compressor spool. The fan acts in the nature of a ducted propeller, most of its output bypassing the compressor and turbine and joining the exhaust jet to provide extra thrust. This version is sometimes called a "by pass fan jet".

So-called "after-burning" appliances are auxiliary units for mounting in series with certain turbo-jet engines in order to boost their power out-put for short periods. These appliances, have their own fuel supply and utilize the excess oxygen in the gases issuing from the turbo-jet.

Parts

Subject to the general provisions regarding the classification of parts, (see the General Explanatory Note to Section XVI), parts of the engines and motors of this heading are also classified here (e.g., gas turbine rotors, combustion chambers and vents for jet engines, parts of turbo-jet engines (stator rings, with or without blades, rotor discs or wheels, with or without fins, blades and fins), fuel feed regulators, fuel nozzles)."

It should be noted that nacelles, cowlings, cascades, fan duct, nor insulation blankets are not called out in the EN under turbo-jet engines or parts thereof, Section 84.11.

Boeing installs the insulation blankets, produced by Darchem Engineering in England in the nacelles and struts. The blankets are contoured to fit in Page 3 Mr. (b) (6), (b) (7)(C) 3-1421-0695-06/DEA:hm

BOEING

the inside of the thrust reverser inner duct wall, and at the strut installation location. blankets remain affixed to the inner duct wall and are completely stationary during operation of the aircraft. The aircraft engine will function effectively and efficiently without the insulation blankets. The blankets have no conjunctive function with the aircraft engines. Their sole purpose is to protect the nacelle and strut components from damage due to excessive heat. my opinion the Darchem insulation blankets are very similar to a layer of insulation under the hood of an automobile to protect the hood and paint from heat damage. I do not believe this layer of insulation would be considered part of the vehicle engine.

Using this information, it is clear that these insulation blankets are not part(s) of the engine, but rather part of the nacelle, which is included in the parts provision of classification 8803.30.0010 HTSUS as described in the EN description of heading 88.03 located on pg. 1445. This Note reads in pertinent parts as follows:

"This heading covers parts of the goods falling in heading 88.01 or 88.02, provided the parts fulfill both of the following conditions:

- (i) They must be identifiable as being suitable for use solely or principally with the goods for the above mentioned headings; and
- (ii) They must not be excluded by the provision of the Notes of Section XVII....

The parts of this heading include:

- (I) Parts of balloons and dirigibles, such as....
- (II) parts of aircraft including gliders and kits, e.g.:
-(4) Nacelles, cowlings, engine pods, and plyons...."

We believe that insulation blankets for commercial airplanes are properly classified in subheading

Page 4 Mr. (b) (6), (b) (7)(C) 3-1421-0695-06/DEA:hm

8803.30.0010 because they are (1) not excluded by the provision of the Notes of Section XVII; (2) identifiable as being suitable for use solely or principally with the goods of heading 88.02 as required by EN 88.03. The parts are not excluded by the provision of the Notes to Section XVII because the insulation blankets for commercial airplanes are not:

BOEING

- 1: Articles of heading 9501, 9503, 9508, sleds, etc.
- 2. (a) Joints, washers or the like, or articles of rubber;
 - (b.) parts of general use defined in note
 2 of Section XI;
 - (c). Articles of Chapter 82;
 - (d). Articles of heading 8306;
 - (e). Machines or apparatus of heading 8401 to 8479;

Articles of heading 8481 or 8482 or 8483;

- (f) Electrical machinery or equipment;
- (g) Articles of Chapter 90;
- (h) Articles of Chapter 91;
- (i-j) Arms;
- (k) Lamps;
- Brushes.

These insulation blankets are readily identifiable as being suitable for use solely or principally with the goods of heading 88.02 because of the designation (insulation blankets for commercial/civil aircraft nacelles).

Established canons of statutory construction recognized by Customs also support the conclusion that the insulation blankets are parts of aircraft. The General Rules of Interpretation govern the classification of merchandise under the Harmonized Tariff Schedules. Rule 1 provides that

Page 5 Mr. (b) (6), (b) (7)(C) 3-1421-0695-06/DEA:hm

BOEING

classification shall be determined according to the terms of the heading and any relative section or chapter notes, and provided such heading or notes do not otherwise require according to Rules 2-6. In this case, the heading and the chapter notes clearly lead one to the conclusion that the insulation blankets are parts of aircraft and not parts of an engine. In addition, the Additional $ar{ t U}. exttt{S}.$ Rules of Interpretation at Rule 1(a) states that "a tariff classification controlled by use (other than actual use) is to be determined in accordance with the use in the United States at, or immediately prior to, the date of importation of goods of that class or kind to which the imported goods belong, and the controlling use is the principal use". They further provide at Rule 1(c) "a provision for parts of an article covers products solely or principally used as part of such articles, but a provision for 'parts' or 'parts and accessories' shall not prevail over a specific provision for such part or accessory". In this case the nacelle insulation blankets are solely used as part of an aircraft.

SUMMARY

The nacelle insulation blankets for commercial airplanes are not engine parts of heading 84.11 as confirmed by the EN to heading 84.11. We believe the blankets fall under the heading of civil aircraft parts based on the requirements of the EN to heading 88.03, which provides for nacelles, cowlings, engine pods, and pylons as parts of aircraft, their commercial designation, and use. As the blankets will be imported for use in civil aircraft, and become an integral part of each nacelle/cowling and strut, by reference to the above section in the EN in the Coding System, and with all of the data and information provided, it should be concluded that the insulation blankets are properly classified at 8803.30.0010, other parts of airplanes, for use in civil aircraft.

Page 6 Mr. (b) (6), (b) (7)(C) 3-1421-0695-06/DEA:hm

We appreciate your immediate attention in this matter, and await your decision.



BOEING

Traffic Administrator 3-1421, K18-25 316-523-4312

Enclosure

CC:

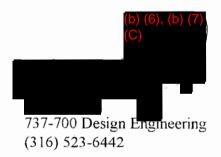
(b) (6), (b) (7)(C) (b) (6), (b) (7)

K18-25

F. H. Kaysing Co. P.O. Box 12497 Wichita, KS 67277 To: (b) (6), (b) (7) K18-25

I am forwarding the following information in response to our conversation of 5/10/95 regarding the 737-700 Thrust Reverser and Strut Insulation Blankets. The Insulation Blankets are mechanically fastened to the Inner Wall of the Thrust Reverser, and to the Strut, and are considered by the Boeing Company to be nacelle and strut components, and not part of the aircraft engine. The attached figures fully depict this position. The nacelle, consists of the Inlet, Fan Cowl and Thrust Reverser.

The Insulation Blankets are specifically designed and engineered to fit on the inside of the Inner Duct Wall of the Thrust Reverser and the Strut, and are utilized for only one purpose. That function is to protect the nacelle components and strut from damage due to high temperatures produced by the aircraft engine. I trust this information will assist you in your discussions with the U.S. Customs Service. Please contact me if you require additional information.



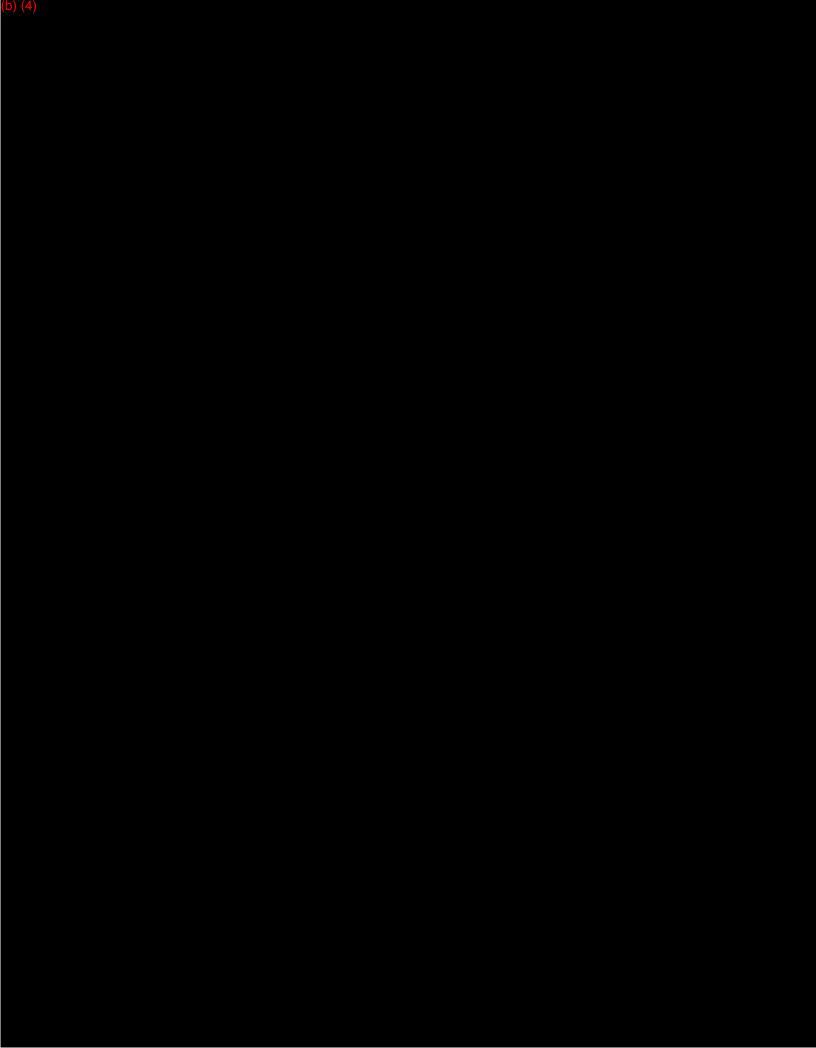
attachments

Figure 1 - (b) (4)

Figure 2 - (b) (4)

Figure 3 - (b) (4)

Figure 4 - (b) (4)



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Author: (b) (6), EY at AREA-NEW_YORK-2 Date: 6/6/95 1:53 PM

Priority: Normal Receipt Requested

Subject: Re[2]: NY Ruling Request (file 809292) forwarded to HQ . .

----- Message Contents

(b) (6), - I spoke to (b) I make in the CIE who said he will fax the entire file to you. If you do not receive the file in a reasonable time please let me know. (b)

Reply Separator

Subject: Re: NY Ruling Request (file 809292) forwarded to HQ

Author: (b) (6), (b) (7)(C) at ORR-WASH-1

Date: 6/6/95 12:40 PM

> Pat. We have not received this case. Either it is lost or subject to very late delivery. I suggest you send it again. I hope you have a copy of the ruling request. (b) (6),

> > Reply Separator

Subject: NY Ruling Request (file 809292) forwarded to HQ

Author: (b) (7) at AREA-NEW YORK-2

6/6/95 11:13 AM Date:

> (b)(6), - Per our telephone coversation, I am attaching a copy of my opinion memo on the subject issue. Regards. (b)

DATE:

: Director, Office of Regulations and Rulings TO

Headquarters, U.S. Customs Service

: Chief, NIS Machinery Branch FROM

National Import Specialist Staff

Tariff classification of thrust reverser and strut insulation blankets SUBJECT:

from England

This request for a tariff classification ruling from F. H. Kaysing Co., on behalf of The Boeing Company, is being forwarded for your attention due to its complexity and lack of clear precedence.

There are apparently two insulation blankets for consideration. One fits within the inner wall of the entire engine cowling and the other is used at the point where the strut (pylon) joins the nacelle (engine housing). These blankets are contoured to fit the part they are protecting and are said to made of a dimpled metallic foil stainless steel skin with a Min-K insulant. It is not known what this insulating material is. These blankets are designed to protect, respectively, thrust reversers and struts from excessive heat, presumably the heat generated when the aircraft's thrust reversers are in operation.

Thrust reversers are used as an adjunct to the aircraft's brakes to slow an aircraft after it has landed. Thrust reversers are of three types. (1) In the clamshell door system, the doors rotate to close the normal gas stream exit. Cascade vanes then direct the gas stream in a forward direction so that the jet thrust opposes the aircraft motion. (2) In the cold stream reverser system, the actuation system moves a translating cowl rearward and at the same time folds the blocker doors to blank off the cold stream final nozzle, thus diverting the airflow through the cascade vanes. (3) The bucket target system, the last thrust reverser type, uses bucket-type doors to reverse the hot gas stream. It is not known what thrust reverser system is in use in the instant case. There is no case law on the classification of thrust reversers, but it is the opinion of this office that they are aircraft engine parts under 8411. See HQ file 957072 JAS, which is still in progress. These insulation blankets are probably provided for either as parts of aircraft engines (8411) or as parts of aircraft (8803).

Those provisions are as follows:

8411 Turbojets, turbopropellers and other gas turbines, and parts thereof:

Parts:

8411.91 Of turbojets or turbopropellers:

8411.91.10 Cast-iron parts

8411.91.90 Other...3.7 percent

Parts of goods of heading 8801 or 8802: 8803

8803.30.00 Other parts of airplanes or helicopters

...Free

Merchandise is classifiable under the Harmonized Tariff Schedule of the United States (HTSUS) in accordance with the General Rules of Interpretation (GRIs). GRI 1 states in part that for legal purposes, classification shall be determined according to the terms of the headings and any relative section or chapter notes, and provided the headings or notes do not require otherwise, according to GRTs 2 through 6.

For purposes of ssification in subheading 8803 .00, the expressions "parts" and "parts and accessories" do not apply to machines or apparatus of headings 8401 to 8479, or parts thereof. Section XVII, Note 2(e), HTSUS. Therefore, if the insulation blankets in issue are parts of heading 8411, they cannot be classified in heading 8803. In this regard, goods found to be parts that are suitable for use solely or principally with a particular kind of machine or with a number of machines of the

same heading are to be classified with the machines of that heading. Section XVI, Note 2(b), HTSUS.

As a preliminary issue, jet turbines produce propulsion or thrust by expelling air at a much higher velocity than its intake velocity. Essentially, air taken into the turbine at a velocity

equal to the plane's airspeed is compressed, heated and expanded by the combustion of fuel, then expelled at a higher velocity. This causes propulsive thrust in the opposite direction.

As to whether the insulation blankets are parts of heading 8411, one line of cases has held that an article is a part for tariff purposes if it serves a useful function in relation to the main article so that it in some way contributes to the safe or efficient operation of that article. Beacon Cycle & Supply Co., Inc. v. United States, 81 Cust. Ct. 46, C.D. 4764 (1978). As a corollary to this principle, articles have been held to be parts of other articles if their presence is required by law, either for safety reasons or otherwise. The American Schack Company, Inc. v. United States, 1 CIT 1 (1980). Under another line of cases, articles are regarded as parts if they are necessary to the completion of the article with which used, that is, if they are integral, constituent or component parts without which the parent article cannot function as that article. Clipper Belt Lacer Co., Inc. v. United States, 738 F. Supp. 528 (CIT 1990).

Whether or not their presence on the housing of a jet engine is required by Federal Aviation Administration regulations is undocumented. Nevertheless, because the thrust reverser insulation blanket is directly related to protecting a thrust reverser as it slows an aircraft after landing, there is a demonstrated nexus to the safe and efficient operation of the engine and, thus, the plane itself, as to qualify as a part. For this reason, the thrust reverser insulation blanket is classifiable as a part of the article to which it is most immediately related - the engine - rather than to the larger whole - the plane.

The strut insulation blanket, on the other hand, appears to be protecting the strut (pylon) only and is in no way connected to the performance of the engine, but is integral to the pylon itself. The EN to 8803 at page 1145 state that pylons are classified as aircraft parts in 8803. Since the strut insulation blanket is not more specifically provided for as an engine part in 8411, it is classifiable as an aircraft part in 8803.

If there are any questions, please contact National Import Specialist (b) (6), (b) (7)(C) at (b)

(b) (6), (b) (7)(C)

Attachments

